

REMARKS

Claims 13-15 and 19-27 are pending and presented for examination in the application, with claims 13, 15 and 19 being in independent form. Claims 1-12, 16 and 17 were withdrawn by the Patent Office from consideration, and claims 1-12 and 16-18 were previously canceled, without disclaimer or prejudice.

In the June 30, 2003 Office Action, claims 13-15 and 18 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,050,183 to Tanaka et al.

Applicants respectfully submit that independent claims 13, 15 and 19 are patentable over the cited art, for at least the following reasons.

This application relates to methods for preparing a heat-sensitive stencil. As discussed in the application at pages 1-2, it is conventionally known to prepare a heat-sensitive stencil by forming a porous resin layer on a thermoplastic resin film. The stencil can be produced by applying, to a surface of the thermoplastic resin film, a coating liquid containing a resin dissolved in a mixed solvent of a first solvent capable of dissolving the resin and a second solvent substantially incapable of dissolving the resin. The applied coating liquid is then heated to dryness. The resulting stencil unfortunately has the problem that the porous resin layer easily separates from the thermoplastic resin film. In addition, the stencil has a high level of stiffness in humid conditions, so that transferability of the stencil in the printer is not fully satisfactory.

Applicants found that a heat-sensitive stencil wherein a thin resin layer is interposed between a porous resin layer and a resin film, allows tight bonding of the porous resin layer and has

satisfactory flexural rigidity. Independent claims 13, 15 and 19 are directed to methods of preparing such heat-sensitive stencils which (comprises a porous resin layer, a resin film laminated on the porous resin layer, and a thin resin layer interposed between the porous resin layer and the resin film, and) avoid the problems of conventional stencils.

For example, according to independent claim 13, the method of preparing a heat-sensitive stencil includes (i) applying a wet coating composition to a surface of said resin film, said wet composition containing a resin, a first solvent capable of dissolving said resin, and a second solvent substantially incapable of dissolving said resin, (ii) applying heat to said composition at a temperature below a boiling point of said second solvent and sufficient to vaporize at least part of said first solvent, and (iii) form said thin resin layer and said porous layer simultaneously as a continuous unitary body on said surface of said film, by drying said applied composition by applying heat to said composition at a temperature sufficient to completely vaporize said first solvent and said second solvent.

The method of independent claim 15 includes applying a first coating composition to a surface of said resin film, drying said applied first composition to form said thin resin layer on said surface of said film, applying a second coating composition to a surface of said thin resin layer, and drying said applied second composition to form said porous resin layer on said surface of said thin resin layer.

A method of preparing a heat-sensitive stencil, according to independent claim 19, includes (a) applying a wet coating composition to a releasable surface, the wet composition containing a resin, a first solvent capable of dissolving the resin, and a second solvent

substantially incapable of dissolving the resin, (b) drying the applied composition to form the thin resin layer and the porous resin layer simultaneously as a continuous unitary body on the releasable surface, (c) separating the unitary body formed by the thin resin layer and the porous resin layer from the releasable surface, and (d) bonding the resin film to the thin resin layer of the unitary body.

Applicants also found that additional optional features that may be added to enhance these advantages. For example, the method may further include forming a non-resinous porous layer on the porous resin layer (claim 20). As another example, the resin film may have at least one resin component which is the same as that of the thin resin layer (claim 24), and/or the thin resin layer may have at least one resin component which is the same as that of the porous resin layer (claim 25). According to another embodiment (claim 27), the thin resin layer can have no resin component which is common to that of the porous resin layer. A heat-sensitive stencil, obtained through practice of the claimed invention, can have a flexural rigidity of at least 10 mN (claim 21), an adhesion strength between the thin resin layer and the resin film of at least 1.0 kg/cm² (claim 22), and a thickness of the thin resin layer in a range of 0.001 μ m to 10 μ m (claim 23). The heat-sensitive stencil can be wound around a cylindrical core (claim 26).

Applicants do not find a teaching or suggestion in Tanaka of methods for preparing a heat-sensitive stencil wherein a thin resin layer is interposed between a porous resin layer and a resin film, and the thin resin layer and porous layer are simultaneously formed as a continuous unitary body (independent claims 13 and 19). Applicants also find no teaching or suggestion in Tanaka of other methodologies (such as independent claim 15) for preparing a heat-sensitive stencil

wherein a thin resin layer is interposed between a porous resin layer and a resin film. Tanaka simply does not suggest that a heat-sensitive stencil produced through such methods would have such beneficial advantages.

Accordingly, for at least the above-stated reasons, Applicants respectfully submit that independent claims 13, 15 and 19, and claims depending therefrom, are patentable over the cited art.


If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition, and the Commissioner is authorized to charge the requisite fees to our Deposit Account No. 03-3125.

The Office is hereby authorized to charge any additional fees that may be required in connection with this response and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Reconsideration and allowance of this application are respectfully requested.

Respectfully submitted,


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